0590



OIPE

#4

RAW SEQUENCE LISTING DATE: 01/31/2002 PATENT APPLICATION: US/09/943,286 TIME: 13:09:37

Input Set : A:\GP104.SeqLst.corrected.txt
Output Set: N:\CRF3\01312002\I943286.raw

## ENTERED

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3 <110> APPLICANT: Nunomura, Kiyotada
      5 <120> TITLE OF INVENTION: POLYNUCLEOTIDE AMPLIFICATION METHOD
      8 <130> FILE REFERENCE: GP104-02.UT
C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/943,286
C--> 10 <141> CURRENT FILING DATE: 2001-08-30
     10 <160> NUMBER OF SEQ ID NOS: 9
    12 <170> SOFTWARE: FastSEQ for Windows Version 3.0
    14 <210> SEQ ID NO: 1
    15 <211> LENGTH: 55
    16 <212> TYPE: DNA
    17 <213> ORGANISM: Artificial Sequence
    19 <220> FEATURE:
    20 <223> OTHER INFORMATION: Primer T7A(-)4190
     22 <400> SEQUENCE: 1
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    27 <212> TYPE: DNA
     28 <213> ORGANISM: Artificial Sequence
     30 <220> FEATURE:
     31 <223> OTHER INFORMATION: Primer (+)4108
     33 <400> SEQUENCE: 2
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     36 <210> SEQ ID NO: 3
     37 <211> LENGTH: 8933
     38 <212> TYPE: RNA
     39 <213> ORGANISM: Human Immunodeficiency Virus
     41 <220> FEATURE:
    42 <221> NAME/KEY: source
    43 <222> LOCATION: (1)...(8933)
     44 <223> OTHER INFORMATION: Sequence of transcripts produced from the BH10
    45
             plasmid.
    47 <400> SEQUENCE: 3
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                                                                               120
    49 cgacugguga guacgccaaa aauuuugacu agcggaggcu agaaggagag agaugggugc
    50 gagagcguca guauuaagcg ggggagaauu agaucgaugg gaaaaaauuc gguuaaggcc
                                                                               180
                                                                               240
     51 agggggaaag aaaaaauaua aauuaaaaca uauaguaugg gcaagcaggg agcuagaacg
     52 auucgcaguu aauccuggcc uguuagaaac aucagaaggc uguagacaaa uacugggaca
                                                                               300
    53 gcuacaacca ucccuucaga caggaucaga agaacuuaga ucauuauaua auacaguagc
    54 aacccucuau ugugugcauc aaaggauaga gauaaaagac accaaggaag cuuuagacaa
                                                                               420
    55 gauagaggaa gagcaaaaca aaaguaagaa aaaagcacag caagcagcag cugacacagg
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     56 acacagcagu caggucagcc adaauuaccc uauagugcag aacauccagg ggcaaauggu
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     57 acaucaggee auaucaccua gaacuuuaaa ugcaugggua aaaguaguag aagagaagge
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Input Set : A:\GP104.SeqLst.corrected.txt
Output Set: N:\CRF3\01312002\I943286.raw

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59	uuuaaacacc	augcuaaaca	cagugggggg	acaucaagca	gccaugcaaa	uguuaaaaga	720
60	gaccaucaau	gaggaagcug	cagaauggga	uagaguacau	ccagugcaug	cagggccuau	780
61	ugcaccaggc	cagaugagag	aaccaagggg	aagugacaua	gcaggaacua	cuaguacccu	840
62	ucaggaacaa	auaggaugga	ugacaaauaa	uccaccuauc	ccaguaggag	aaauuuauaa	900
63	aagauggaua	auccugggau	uaaauaaaau	aguaagaaug	uauagcccua	ccagcauucu	960
64	ggacauaaga	caaggaccaa	aagaaccuuu	uagagacuau	guagaccggu	ucuauaaaac	1020
65	ucuaagagcc	gagcaagcuu	cacaggaggu	aaaaauugg	augacagaaa	ccuuguuggu	1080
66	ccaaaaugcg	aacccagauu	guaagacuau	uuuaaaagca	uugggaccag	cggcuacacu	1140
67	agaagaaaug	augacagcau	gucagggagu	aggaggaccc	ggccauaagg	caagaguuuu	1200
68	ggcugaagca	augagccaag	uaacaaauac	agcuaccaua	augaugcaga	gaggcaauuu	1260
69	uaggaaccaa	agaaagaugg	uuaaguguuu	caauuguggc	aaagaagggc	acacagccag	1320
70	aaauugcagg	gccccuagga	aaaagggcug	uuggaaaugu	ggaaaggaag	gacaccaaau	1380
71	gaaagauugu	acugagagac	aggcuaauuu	uuuagggaag	aucuggccuu	ccuacaaggg	1440
72	aaggccaggg	aauuuucuuc	agagcagacc	agagccaaca	gccccaccau	uucuucagag	1500
73	cagaccagag	ccaacagccc	caccagaaga	gagcuucagg	ucugggguag	agacaacaac	1560
74	ucccccucag	aagcaggagc	cgauagacaa	ggaacuguau	ccuuuaacuu	cccucagauc	1620
75	acucuuuggc	aacgaccccu	cgucacaaua	aagauagggg	ggcaacuaaa	ggaagcucua	1680
76	uuagauacag	gagcagauga	uacaguauua	gaagaaauga	guuugccagg	aagauggaaa	1740
77	ccaaaaauga	uagggggaau	uggagguuuu	aucaaaguaa	gacaguauga	ucagauacuc	1800
78	auagaaaucu	guggacauaa	agcuauaggu	acaguauuag	uaggaccuac	accugucaac	1860
79	auaauuggaa	gaaaucuguu	gacucagauu	gguugcacuu	uaaauuuucc	cauuagcccu	1920
80	auugagacug	uaccaguaaa	auuaaagcca	ggaauggaug	gcccaaaagu	uaaacaaugg	1980
81	ccauugacag	aagaaaaaau	aaaagcauua	guagaaauuu	guacagaaau	ggaaaaggaa	2040
82	gggaaaauuu	caaaaauugg	gccugagaau	ccauacaaua	cuccaguauu	ugccauaaag	2100
83	aaaaaagaca	guacuaaaug	gagaaaauua	guagauuuca	gagaacuuaa	uaagagaacu	2160
84	caagacuucu	gggaaguuca	auuaggaaua	ccacaucccg	caggguuaaa	aaagaaaaaa	2220
85	ucaguaacag	uacuggaugu	gggugaugca	uauuuuucag	uucccuuaga	ugaagacuuc	2280
86	aggaaguaua	cugcauuuac	cauaccuagu	auaaacaaug	agacaccagg	gauuagauau	2340
87	caguacaaug	ugcuuccaca	gggauggaaa	ggaucaccag	caauauucca	aaguagcaug	2400
88	acaaaaaucu	uagagccuuu	uaaaaaacaa	aauccagaca	uaguuaucua	ucaauacaug	2460
89	gaugauuugu	auguaggauc	ugacuuagaa	auagggcagc	auagaacaaa	aauagaggag	2520
90	cugagacaac	aucuguugag	guggggacuu	accacaccag	acaaaaaca	ucagaaagaa	2580
91	ccuccauucc	uuuggauggg	uuaugaacuc	cauccugaua	aauggacagu	acagccuaua	2640
92	gugcugccag	aaaaagacag	cuggacuguc	aaugacauac	agaaguuagu	ggggaaauug	2700
93	aauugggcaa	gucagauuua	cccagggauu	aaaguaaggc	aauuauguaa	acuccuuaga	2760
94	ggaaccaaag	cacuaacaga	aguaauacca	cuaacagaag	aagcagagcu	agaacuggca	2820
95	gaaaacagag	agauucuaaa	agaaccagua	cauggagugu	auuaugaccc	aucaaaagac	2880
96	uuaauagcag	aaauacagaa	gcaggggcaa	ggccaaugga	cauaucaaau	uuaucaagag	2940
97	ccauuuaaaa	aucugaaaac	aggaaaauau	gcaagaauga	ggggugccca	cacuaaugau	3000
98	guaaaacaau	uaacagaggc	agugcaaaaa	auaaccacag	aaagcauagu	aauaugggga	3060
99	aagacuccua	aauuuaaacu	acccauacaa	aaggaaacau	gggaaacaug	guggacagag	3120
						uuuagugaaa	3180
10	1 uuaugguaco	aguuagagaa	a agaacccaua	a guaggagcag	g aaaccuucua	uguagauggg	3240
10	2 gcagcuaaca	a gggagacuaa	auuaggaaa	a gcaggauau	g uuacuaacaa	a aggaagacaa	3300
10	3 aagguuguco	cccuaacuaa	a cacaacaaa	ı cagaaaacu	g aguuacaago	c aauuuaucua	3360
10	4 gcuuugcagg	g auucaggaui	ı agaaguaaad	c auaguaaca	g acucacaaua	a ugcauuagga	3420
10	5 aucauucaag	g cacaaccaga	uaaaagugaa	a ucagaguuag	g ucaaucaaaı	ı aauagagcag	3480
10	6 uuaauaaaa	a aggaaaaggu	ı cuaucuggca	uggguaccag	g cacacaaag	g aauuggagga	3540

Input Set : A:\GP104.SeqLst.corrected.txt
Output Set: N:\CRF3\01312002\I943286.raw

				ggaaucagga			3600
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109	gauuuuaacc	ugccaccugu	aguagcaaaa	gaaauaguag	ccagcuguga	uaaaugucag	3720
110	cuaaaaggag	aagccaugca	uggacaagua	gacuguaguc	caggaauaug	gcaacuagau	3780
111	uguacacauu	uagaaggaaa	aguuauccug	guagcaguuc	auguagccag	uggauauaua	3840
112	gaagcagaag	uuauuccagc	agaaacaggg	caggaaacag	cauauuuucu	uuuaaaauua	3900
113	gcaggaagau	ggccaguaaa	aacaauacau	acagacaaug	gcagcaauuu	caccagugcu	3960
114	acgguuaagg	ccgccuguug	gugggcggga	aucaagcagg	aauuuggaau	ucccuacaau	4020
115	ccccaaaguc	aaggaguagu	agaaucuaug	aauaaagaau	uaaagaaaau	uauaggacag	4080
116	guaagagauc	aggcugaaca	ucuuaagaca	gcaguacaaa	uggcaguauu	cauccacaau	4140
117	uuuaaaagaa	aaggggggau	ugggggguac	agugcagggg	aaagaauagu	agacauaaua	4200
118	gcaacagaca	uacaaacuaa	agaauuacaa	aaacaaauua	caaaaauuca	aaauuuucgg	4260
119	guuuauuaca	gggacagcag	aaauccacuu	uggaaaggac	cagcaaagcu	ccucuggaaa	4320
120	ggugaagggg	caguaguaau	acaagauaau	agugacauaa	aaguagugcc	aagaagaaaa	4380
121	gcaaagauca	uuagggauua	uggaaaacag	auggcaggug	augauugugu	ggcaaguaga	4440
122	caggaugagg	auuagaacau	ggaaaaguuu	aguaaaacac	cauauguaug	uuucagggaa	4500
123	agcuagggga	ugguuuuaua	gacaucacua	ugaaagcccu	cauccaagaa	uaaguucaga	4560
124	aguacacauc	ccacuagggg	augcuagauu	gguaauaaca	acauauuggg	gucugcauac	4620
125	aggagaaaga	gacuggcauu	ugggucaggg	agucuccaua	gaauggagga	aaaagagaua	4680
				ccaacuaauu			4740
				auuaggacac			4800
				ucuacaauac			4860
				uaguguuacg			4920
				agggagccac			4980
	-			agacauuuuc			5040
				gauacuuggg			5100
		_		uuucagaauu			5160
				uggagccagu			5220
				cuuguaccaa			5280
				aagccuuagg			5340
				gcagucagac			5400
				uacaaauagc			5460
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				gacuaauaga			5580
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				acacaugccu			5820
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				uuaugggauc			5940
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				uauacguuga			6180
				gagccaauuc			6240
							6300
		_	_	aagacguuca			6360
				auuaggccag			6420
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133	youaaaacca	uaauayuaca	yeuyaaccaa	ucuguagaaa	uuaauuyudC	aayacccaac	0400

Input Set : A:\GP104.SeqLst.corrected.txt
Output Set: N:\CRF3\01312002\1943286.raw

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156 aacaauacaa gaaaaaguau ccguauccag agaggaccag ggagagcauu uguuacaaua
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                                                                          6600
158 acuuuaaaac agauagauag caaauuaaga gaacaauuug gaaauaauaa aacaauaauc
                                                                          6660
                                                                          6720
159 uuuaagcagu ccucaggagg ggacccagaa auuguaacgc acaguuuuaa uuguggaggg
160 gaauuuuucu acuguaauuc aacacaacug uuuaauagua cuugguuuaa uaguacuugg
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161 aguacuaaag ggucaaauaa cacugaagga agugacacaa ucacccuccc augcagaaua
                                                                          6840
162 aaacaaauua uaaacaugug gcaggaagua ggaaaagcaa uguaugcccc ucccaucagu
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163 ggacaaauua gauguucauc aaauauuaca gggcugcuau uaacaagaga uggugguaau
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164 agcaacaaug aguccgagau cuucagaccu ggaggaggag auaugaggga caauuggaga
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165 agugaauuau auaaauauaa aguaguaaaa auugaaccau uaggaguagc acccaccaag
                                                                          7080
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166 gcaaagagaa gaguggugca gagagaaaaa agagcagugg gaauaggagc uuuguuccuu
167 ggguucuugg gagcagcagg aagcacuaug ggcgcagcgu caaugacgcu gacgguacag
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168 gccagacaau uauuqucugg uauagugcag cagcagaaca auuugcugag ggcuauugag
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169 gcgcaacagc aucuguugca acucacaguc uggggcauca agcagcucca ggcaagaauc
170 cuggcugugg aaagauaccu aaaggaucaa cagcuccugg ggauuugggg uugcucugga
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                                                                          7440
171 aaacucauuu gcaccacugc ugugccuugg aaugcuaguu ggaguaauaa aucucuggaa
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172 cagauuugga auaacaugac cuggauggag ugggacagag aaauuaacaa uuacacaagc
                                                                          7560
173 uuaauacacu ccuuaauuga agaaucgcaa aaccagcaag aaaagaauga acaagaauua
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174 uuggaauuag auaaaugggc aaguuugugg aauugguuua acauaacaaa uuggcugugg
                                                                          7680
175 uauauaaaau uauucauaau gauaguagga ggcuugguag guuuaagaau aguuuuugcu
176 guacuuucug uagugaauag aguuaggcag ggauauucac cauuaucguu ucagacccac
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177 cucccaaucc cgaggggacc cgacaggccc gaaggaauag aagaagaagg uggagagaga
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178 gacagagaca gauccauucg auuagugaac ggauccuuag cacuuaucug ggacgaucug
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180 auuguggaac uucugggacg cagggggugg gaagcccuca aauauuggug gaaucuccua
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182 gcaguagcug aggggacaga uaggguuaua gaaguaguac aaggagcuua uagagcuauu
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183 cgccacauac cuagaagaau aagacagggc uuggaaagga uuuugcuaua agaugggugg
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185 ugagccagca gcagaugggg ugggagcagc aucucgagac cuagaaaaac auggagcaau
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187 ggaggaggug gguuuuccag ucacaccuca gguaccuuua agaccaauga cuuacaaggc
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188 agcuguagau cuuagccacu uuuuaaaaga aaagggggga cuggaagggc uaauucacuc
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189 ccaacgaaga caagauaucc uugaucugug gaucuaccac acacaaggcu acuucccuga
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190 uuagcagaac uacacaccag ggccagggau cagauaucca cugaccuuug gauggugcua
191 caagcuagua ccaguugagc cagagaaguu agaagaagcc aacaaaggag agaacaccag
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192 cuuquuacac ccugugagcc ugcauggaau ggaugacccg gagagagaag uguuagagug
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193 gagguuugac agccgccuag cauuucauca cauggcccga gagcugcauc cggaguacuu
194 caaqaacuqc uqacaucqaq cuuqcuacaa gggacuuucc gcuggggacu uuccagggag
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195 gcguggccug ggcgggacug gggaguggcg agcccucaga uccugcauau aagcagcugc
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                                                                          8933
196 uuuuugccug uacugggucu cucugguuag accagaucug agccugggag cuc
200 <210> SEQ ID NO: 4
201 <211> LENGTH: 8933
202 <212> TYPE: RNA
203 <213> ORGANISM: Artificial Sequence
205 <220> FEATURE:
206 <223> OTHER INFORMATION: Sequence of the IAC-Asrc pseudo target
208 <221> NAME/KEY: mutation
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209 <222> LOCATION: (4135)...(4155)

Input Set : A:\GP104.SeqLst.corrected.txt
Output Set: N:\CRF3\01312002\I943286.raw

210 <223> OTHER INFORMATION: Mutated positions: 4135, 4140-1, 4145, 4150, 4152-3, 4155 211 213 <400> SEQUENCE: 4 214 gagcucucuc gacgcaggac ucggcuugcu gaagcgcgca cggcaagagg cgaggggcgg 60 215 cgacugguga guacgccaaa aauuuugacu agcggaggcu agaaggagag agaugggugc 120 180 216 gagagcguca guauuaagcg ggggagaauu agaucgaugg gaaaaaauuc gguuaaggcc 240 217 agggggaaag aaaaaauaua aauuaaaaca uauaguaugg gcaagcaggg agcuagaacg 300 218 auucgcaguu aauccuggcc uguuagaaac aucagaaggc uguagacaaa uacugggaca 360 219 gcuacaacca ucccuucaga caggaucaga agaacuuaga ucauuauaua auacaguagc 420 220 aacccucuau ugugugcauc aaaggauaga gauaaaagac accaaggaag cuuuagacaa 221 gauagaggaa gagcaaaaca aaaguaagaa aaaagcacag caagcagcag cugacacagg 480 540 222 acacaqcagu caggucagcc aaaauuaccc uauagugcag aacauccagg ggcaaauggu 600 223 acaucaggcc auaucaccua gaacuuuaaa ugcaugggua aaaguaguag aagagaaggc 660 224 uuucaqccca qaaquaauac ccauquuuuc agcauuauca gaaggagcca ccccacaaga 720 225 uuuaaacacc augcuaaaca cagugggggg acaucaagca gccaugcaaa uguuaaaaga 226 gaccaucaau gaggaagcug cagaauggga uagaguacau ccagugcaug cagggccuau 780 840 227 uqcaccaqqc caqauqaqaq aaccaagggg aagugacaua gcaggaacua cuaguacccu 228 ucaggaacaa auaggaugga ugacaaauaa uccaccuauc ccaguaggag aaauuuauaa 900 960 229 aagauggaua auccugggau uaaauaaaau aguaagaaug uauagcccua ccagcauucu 1020 230 ggacauaaga caaggaccaa aagaaccuuu uagagacuau guagaccggu ucuauaaaac 231 ucuaagagcc gagcaagcuu cacaggaggu aaaaaauugg augacagaaa ccuuguuggu 1080 232 ccaaaaugcg aacccagauu guaagacuau uuuaaaagca uugggaccag cggcuacacu 1140 233 agaagaaaug augacagcau gucagggagu aggaggaccc ggccauaagg caagaguuuu 1200 1260 234 gqcuqaaqca augagccaag uaacaaauac agcuaccaua augaugcaga gaggcaauuu 235 uaggaaccaa agaaagaugg uuaaguguuu caauuguggc aaagaagggc acacagccag 1320 236 aaauugcagg gccccuagga aaaagggcug uuggaaaugu ggaaaggaag gacaccaaau 1440 237 gaaagauugu acugagagac aggcuaauuu uuuagggaag aucuggccuu ccuacaaggg 1500 238 aaggccaggg aauuuucuuc agagcagacc agagccaaca gccccaccau uucuucagag 1560 239 cagaccagag ccaacagccc caccagaaga gagcuucagg ucugggguag agacaacaac 240 ucccccucag aagcaggagc cgauagacaa ggaacuguau ccuuuaacuu cccucagauc 1620 1680 241 acucuuuggc aacqaccccu cqucacaaua aagauagggg ggcaacuaaa ggaagcucua 242 uuagauacag gagcagauga uacaguauua gaagaaauga guuugccagg aagauggaaa 1740 1800 243 ccaaaaauga uagggggaau uggagguuuu aucaaaguaa gacaguauga ucagauacuc 244 auagaaaucu guggacauaa agcuauaggu acaguauuag uaggaccuac accugucaac 1860 1920 245 auaauuggaa gaaaucuguu gacucagauu gguugcacuu uaaauuuucc cauuagcccu 1980 246 auuqagacug uaccaguaaa auuaaagcca ggaauggaug gcccaaaagu uaaacaaugg 247 ccauugacag aagaaaaaau aaaagcauua guagaaauuu guacagaaau ggaaaaggaa 2040 2100 248 qqqaaaauuu caaaaauugg gccugagaau ccauacaaua cuccaguauu ugccauaaag 249 aaaaaagaca guacuaaaug gagaaaauua guagauuuca gagaacuuaa uaagagaacu 2160 250 caagacuucu gggaaguuca auuaggaaua ccacaucccg caggguuaaa aaagaaaaaa 2220 2280 251 ucaguaacag uacuggaugu gggugaugca uauuuuucag uucccuuaga ugaagacuuc 2340 252 aggaaguaua cugcauuuac cauaccuagu auaaacaaug agacaccagg gauuagauau 2400 253 caguacaaug ugcuuccaca gggauggaaa ggaucaccag caauauucca aaguagcaug 2460 254 acaaaaaucu uagagccuuu uaaaaaacaa aauccagaca uaguuaucua ucaauacaug 255 qauqauuuqu auquaqgauc ugacuuagaa auagggcagc auagaacaaa aauagaggag 2520 256 cugagacaac aucuguugag guggggacuu accacaccag acaaaaaaca ucagaaagaa 2580 257 ccuccauucc uuuggauggg uuaugaacuc cauccugaua aauggacagu acagccuaua 2640 258 gugcugccag aaaaagacag cuggacuguc aaugacauac agaaguuagu ggggaaauug 2700 259 aauuqqqcaa qucaqauuua cccaqqqauu aaaguaaggc aauuauguaa acuccuuaga 2760

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/943,286

DATE: 01/31/2002

TIME: 13:09:39

Input Set : A:\GP104.SeqLst.corrected.txt
Output Set: N:\CRF3\01312002\I943286.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application No

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date